East San Joaquin
WATER QUALITY COALITION
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January 6, 2012

Pamela Creedon, Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Ms. Creedon,

The East San Joaquin Water Quality Coalition (Coalition) is submitting a request to remove monitoring requirements for specific constituents from selected site subwatershed management plans and therefore from the site's Management Plan Monitoring (MPM) schedule. The Coalition's Management Plan process outlined in the Coalition's original Management Plan (approved November 25, 2008, Figure 2) and updated in the Management Plan Update Report for 2010 (Figure 1, page 13) includes two or more years of Management Plan Monitoring with no exceedances after which there is the opportunity to petition the Regional Board for removal of analytes from the Management Plan.

A management plan must be developed for a specific site if 1) a constituent exceeds the Water Quality Trigger Limit (WQTL) once when that constituent has an implemented Total Maximum Daily Load (TMDL) Basin Plan Amendment, or 2) if there is more than one exceedance of the WQTL for a constituent without a TMDL. The Coalition initiates several actions once a constituent is added to its approved Management Plan including additional MPM during months of past exceedances, and focused outreach to address the source of the constituent and eliminate its discharge to surface waters of the State. If there are two consecutive years of monitoring at a site with no exceedances of the WQTL for the management plan constituent (either during Core Monitoring, Assessment Monitoring, MPM, or a combination of any of the three), that constituent may be removed from an active management plan.

The basis for the request is two consecutive years of monitoring at a site subwatershed with no exceedances of a specific constituent indicating improved water quality due to implemented management practices by growers in the subwatershed. If approved, the Coalition will remove the constituents from site subwatershed management plans. However, the Coalition will monitor these locations for the specific constituents when the site rotates into Assessment Monitoring.
The supporting documentation for the request is included on the following pages.

If necessary, we can schedule a meeting to discuss this request at your earliest convenience.
Submitted respectfully,

Parry Klassen
Executive Director
East San Joaquin Water Quality Coalition

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INTRODUCTION

When a constituent becomes the focus of the ESJWQC Management Plan, the Coalition initiates actions to address the exceedances including additional Management Plan Monitoring (MPM) during months of past exceedances and focused outreach. The ESJWQC Management Plan includes a flow chart which describes the process by which the Coalition conducts monitoring, source identification, and outreach and evaluation of implemented management practices. The goal is that after focused outreach, growers will implement additional practices and there will be an improvement of water quality. The Coalition began its general outreach and its initial general outreach in 2007 and initial focused outreach in 2008 and has collected sufficient water quality data for a subset of subwatersheds and constituents to document improved water quality. The Coalition therefore is requesting the removal of the site subwatershed constituents listed in Table 1.

Table 1. ESJWQC site subwatersheds, Assessment Monitoring history and constituents to remove from active management plan and Management Plan Monitoring schedule.

Site Subwatershed	Most Recent Assessment Monitoring	Future Assessment Monitoring	Dissolved Oxygen (DO)*	pH*	Specific Conductance (SC)*	Copper (Total & Dissolved)	Lead Total & Dissolved)	Ammonia	*E. coli*	Total Dissolved Solids (TDS)	Chlorpyrifos	Diazinon	Diuron	Simazine	*Ceriodaphnia dubia* toxicity	*Selenastrum capricornutum* toxicity
Ash Slough @ Ave 21	2010	2015					X		X		X					
Bear Creek @ Kibby Rd	2008†	2025	X								X				X	
Cottonwood Creek @ Rd 20	2011	2014										X	X			
Deadman Creek @ Gurr Rd	2010	2017				X										
Dry Creek @ Wellsford Rd	2011	2014			X	X							X			X
Duck Slough @ Gurr Rd	2011	2014			X					X	X					X
Duck Slough @ Hwy 99	2008†	2013	X								X					X
Highline Canal @ Hwy 99	2011	2014		X	X	X		X		X	X		X			
Highline Canal @ Lombardy Rd	2011	2012	X		X											
Hilmar Drain @ Central Ave	2008†	2021									X					
Lateral 2 ½ near Keyes Rd	2010	2029							X							
Merced River @ Santa Fe	2011	2014	X													
Mustang Creek @ East Ave	2010	2015									X			X		
Prairie Flower Drain @ Crows Landing Rd	2011	2014		X							X					

*Field parameters will continue to be monitored during Assessment, Core and Management Plan Monitoring events.
†Site was monitored for Assessment Monitoring constituents under the 2006 MRPP where monitoring was not defined as Core or Assessment Monitoring.

The Coalition considers two factors to determine if a constituent can be removed from a site subwatershed's management plan and MPM schedule:

1. No exceedances of the specific constituent(s) occurred during at least two consecutive years of monitoring in months of past exceedances.

2. Documentation of current and newly implemented management practices.

To support the Coalition's request, data are provided for each constituent documenting improvement in water quality and successful outreach. For each site subwatershed, the Coalition provides the following:

1.) Constituent overview, monitoring history, summary of monitoring data relevant to specific constituents, potential sources of exceedances and review of PUR data when available/applicable,

2.) Summary of outreach and management practice implementation,

3.) Schedule for future monitoring, and

4.) Justification for request to remove constituent(s) and review of how the Coalition has met the requirements for removal as outlined in the Coalition's Management Plan Monitoring Strategy and Management Practice Evaluation flowchart (ESJWQC Management Plan originally approved on November 25, 2008, Figure 2, page 23 and updated in the ESJWQC Management Plan Update Report for 2010, Figure 1, page 17).

SUPPORTING DOCUMENTATION TO REMOVE SPECIFIC CONSTITUENTS FROM SITE SUBWATERSHED MANAGEMENT PLANS

Ash Slough @ Ave 21

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos
- *E. coli*
- Lead

Subwatershed Overview and Monitoring History

The Ash Slough @ Ave 21 is a rotating Assessment Monitoring location within the Cottonwood Creek @ Rd 20 Zone (Zone 6). Monitoring occurred at the site from the 2005 irrigation season through 2010; the site was scheduled for Assessment Monitoring through 2010 under the 2008 Monitoring and Reporting Program Plan (MRPP). However, following the 2006 irrigation season, Ash Slough was dry during all events in 2007 through 2010 except two (May 2009 and April 2010).

The Ash Slough subwatershed has two upstream locations: Ash Slough at Vista Avenue and Ash Slough at Avenue 23 ½. These two sites were sampled once each during August 2006 as a part of the ESJWQC Bacteria Sourcing Study. Of the two upstream locations, only the Ash Slough at Vista Avenue site had water at the time of sampling; Ash Slough at Avenue 23 ½ was dry.

The Coalition began conducting general outreach and education in the Ash Slough subwatershed in 2007. In addition, the results of sampling the slough in 2005 and 2006 required the Coalition establish a management plan for Ash Slough @ Ave 21. Management Plan Monitoring for high priority constituents was scheduled in 2007 and 2008; however, the site was dry during all sampling events. Initially, the Coalition scheduled Ash Slough to be a part of the third set of high priority management plan subwatersheds (focused outreach 2011-2013). However, the slough continued to be dry during all but two sampling events during Assessment Monitoring in 2008 through 2010. On November 17, 2010 the Coalition was allowed to move Ash Slough to the seventh set of high priority subwatersheds (focused outreach 2015-2017). Focused outreach and MPM will begin in the Ash Slough subwatershed in 2015.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

The Regional Board established a TMDL for chlorpyrifos for the drainage area of the ESJWQC region (Lower San Joaquin River Chlorpyrifos and Diazinon TMDL); consequently, chlorpyrifos is considered one of the highest priority constituents under the Coalition's Management Plan. Water samples exceeded the chlorpyrifos WQTL four times. Exceedances occurred during both irrigation monitoring in 2005 (July and August) and storm monitoring in 2006 (February and March).

Since the most recent chlorpyrifos exceedance in March 2006, Ash Slough @ Ave 21 was scheduled for chlorpyrifos analysis 57 times; however, water was present in the slough during only seven of the events

(the irrigation season of 2006, May 2009 and April 2010). One sampling took place in puddles (May 2009). Chlorpyrifos was not detected in samples from any of the seven events. The end of two consecutive years of monitoring during months of past exceedances was March 2008.

In addition, Pesticide Use Report (PUR) data indicate a decrease in chlorpyrifos applications and acres treated in the Ash Slough @ Ave 21 subwatershed since the most recent exceedance in 2006. All PUR data is reported in pounds (lbs) of active ingredient (AI) applied across total acres treated. The amount of chlorpyrifos applied within the subwatershed has decreased from 2006 (6,611 lbs AI across 3,853 acres) to 2010 (2,829 lbs AI across 1,821 acres).

E. coli

E. coli bacteria indicate fecal contamination in surface waterways, sources of which may include irrigated pastureland, dairies, wildlife, or leaky septic systems. Because irrigated agriculture lands cannot be directly linked to *E. coli* exceedances and sourcing the exceedances is difficult with the tools currently available to the Coalition, the Coalition categorized *E. coli* as a low priority constituent. Samples collected from Ash Slough exceeded the *E. coli* WQTL three times, twice during irrigation events (July 2005 and June 2006) and once during a storm event (February 2006). In August 2006, the Coalition scheduled monitoring of *E. coli* at the three Ash Slough subwatershed sampling locations as part of an *E. coli* sourcing study. Ash Slough at Vista Avenue was the only site of the three with water at the time of sampling, and *E. coli* concentrations were below the WQTL; no conclusions could be drawn.

Since the most recent exceedance, the Coalition conducted over two years of monitoring with no exceedances. Since June 2006, the Coalition scheduled *E. coli* analysis 49 times in the Ash Slough subwatershed. Of the 49 sampling events, two samples collected from the two upstream sites were part of the *E. coli* sourcing study (one sample per site). Flowing water was present in six of the scheduled events (including the event scheduled at the upstream site Ash Slough at Vista Avenue) and all samples had *E. coli* concentrations below the WQTL. The end of two consecutive years of monitoring during months of past exceedances was June 2008.

Lead

Lead is a legacy contaminant from various sources, such as old applications of lead arsenate pesticides, deposition from leaded gasoline, and disposal of lead-containing products including paints, electronic components, lead pipes, and batteries. Since lead arsenate pesticide use was banned before the PUR system was initiated, no data exist to assist in the sourcing of past agricultural applications of lead. Given the number of potential sources and since lead is no longer applied for agricultural use, the Coalition categorized lead as a low priority constituent (priority E). Samples from the Ash Slough @ Ave 21 subwatershed exceeded the WQTL twice during irrigation monitoring (May and June 2006).

Since the most recent exceedance in June 2006, the Coalition conducted over two years of monitoring with no exceedances of the lead WQTL. Monitoring for lead was scheduled for 31 events in Ash Slough since June 2006; water was present during three of those events. Water in none of the samples

collected exceeded the lead WQTL. The end of two consecutive years of monitoring during months of past exceedances was June 2008.

Outreach

The Coalition initiated general outreach in 2007 and has taken several actions to address water quality problems in the Ash Slough @ Ave 21 subwatershed. Actions include grower notification, outreach and education, and management practice implementation and tracking. Through Coalition mailings and meetings/workshops, growers were made aware of downstream water and sediment quality issues as well as the importance of implementing management practices on their farms. The Coalition continues outreach and education in the subwatershed to keep growers informed of emerging water quality concerns and relevant regulations, opportunities for management practice implementation funding, and results of special studies such as management practice effectiveness.

The Coalition believes outreach and education of growers in the Ash Slough subwatershed since 2007 is responsible for improved water quality with respect to chlorpyrifos, *E. coli* and lead. The Coalition plans to continue outreach to all members within the Ash Slough @ Ave 21 subwatershed. In addition, this subwatershed is scheduled to become a high priority management plan subwatershed in 2015, during which time focused outreach will occur for growers with the greatest likelihood of contributing to past exceedances. Through continued outreach, the Coalition will keep growers aware of water quality problems and will prevent the reoccurrence of chlorpyrifos, *E. coli* and lead exceedances.

Future Monitoring

Ash Slough @ Ave 21 will be a high priority management plan subwatershed (focused outreach 2015-2017). Assessment Monitoring is scheduled during 2015 through 2016 and all constituents will be monitored at that time, MPM for high priority constituents will take place in 2017.

Justification to Remove Constituents from Ash Slough @ Ave 21 Management Plan

Growers within Ash Slough @ Ave 21 site subwatershed are aware of water quality problems with chlorpyrifos, *E. coli* and lead and have taken actions to address these problems. Monitoring in Ash Slough has resulted in more than two consecutive years without exceedances of the chlorpyrifos, *E. coli* and lead WQTL since the most recent exceedance dates. The Coalition therefore requests that chlorpyrifos, *E. coli* and lead be removed from the Ash Slough @ Ave 21 management plan and MPM schedule.

Monthly Assessment Monitoring in 2015 and 2016 will include the monitoring for chlorpyrifos, *E. coli* and lead and will allow the Coalition to evaluate water quality with respect to these constituents in the near future.

Bear Creek @ Kibby Rd

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos
- Dissolved Oxygen (DO)
- *Ceriodaphnia dubia* water column toxicity

Subwatershed Overview and Monitoring History

Under the current 2008 MRPP, the Bear Creek @ Kibby Rd site subwatershed is a rotating Assessment Monitoring location within the Merced River @ Santa Fe Zone (Zone 4). Sampling was initiated at Bear Creek @ Kibby Rd during the storm season of 2005 and continued through irrigation season of 2008. Assessment Monitoring under the current 2008 MRPP at Bear Creek @ Kibby Rd is scheduled to occur 2025 and 2026.

The Bear Creek @ Kibby Rd site subwatershed is one of the Coalition's second set of high priority management plan subwatersheds (focused outreach 2010-2012). Management Plan Monitoring at Bear Creek @ Kibby Rd occurred in 2008 (May and July) and included additional sampling for chlorpyrifos and *C. dubia* toxicity. There were no samples collected at this site during 2009; however, the Coalition began high priority MPM in May 2010 and continued through 2011 during months of past exceedances. In addition, the Coalition identified growers with the greatest likelihood of contributing to the water quality impairments (growers farming parcels with the potential for direct drainage or drift to the creek and growers who have applied high priority constituents in the past). The Coalition contacted these growers in 2010 to document current management practices and encourage the implementation of additional practices designed to eliminate water quality problems in Bear Creek. The Coalition re-contacted targeted growers in 2011 to determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

There were two exceedances of the chlorpyrifos WQTL at Bear Creek @ Kibby Rd. Both exceedances occurred during irrigation season sampling events in 2006 (May) and 2007 (July).

Since the most recent chlorpyrifos exceedance in July 2007, the Bear Creek @ Kibby Rd monitoring location was sampled for chlorpyrifos 16 times; eight of those samples were collected during May and July sampling events (four each). There were no exceedances of the chlorpyrifos WQTL during normal or MPM in 2008, 2010, or 2011. Since the July 2007 exceedance, there has only been one detection of chlorpyrifos (during storm sampling in February 2008) in samples collected from Bear Creek @ Kibby Rd in 16 sampling events; however, there were no detections of chlorpyrifos in any of the samples collected during irrigation months (months of past exceedances). The end of two consecutive years of monitoring was July 2011.

The Coalition focused outreach efforts on management practices to reduce spray drift and manage irrigation tailwater return flows in the waterways. In addition, PUR data indicate a general decreasing trend in pounds of chlorpyrifos applied in the Bear Creek @ Kibby Rd subwatershed from 2006 (1,671 lbs AI across 879 acres) to 2010 (808 lbs AI across 636 acres).

Dissolved Oxygen (DO)

Exceedances of the DO WQTL can be caused by various factors (low flow, high levels of biological oxygen demand and/or water temperatures) and determining the exact source(s) of exceedances is impossible. The Regional Board has established a TMDL for DO in waterways to which ESJWQC drains. However, given the difficulty of sourcing exceedances, DO is categorized as one of the lowest priority constituents. There were two exceedances of DO in Bear Creek @ Kibby Rd; March 2005 and June 2006.

Dissolved oxygen is measured as a field parameter at each site during every monitoring event (Core Monitoring, Assessment Monitoring and MPM). Monitoring for DO occurred during each monitoring event and will continue during all sample collection events in the future. Since the most recent June 2006 exceedance, there have been no exceedances of the DO WQTL in 37 events (includes one sampling event in August 2006 for ESJWQC *E. coli* sourcing study). As of June 2008, there were two consecutive years of no exceedances.

Ceriodaphnia dubia water column toxicity

C. dubia water column toxicity is indicative of pesticides, such as chlorpyrifos and diazinon; there have been three instances of *C. dubia* toxicity in the Bear Creek @ Kibby Rd site subwatershed. Toxicity to *C. dubia* occurred in 2005 (May, 5% survival compared to the control), 2006 (May, 0% survival compared to the control) and 2007 (July, 0% survival compared to the control). No toxicity occurred during the 2006 and 2007 resampling events. The TIE that was initiated for the May 2005 toxicity indicated that toxicity in the sample was no longer present. Non-polar organics were determined to be the cause of the May 2006 toxicity and the cause of toxicity for July 2007 samples could not be identified. Toxicity was not persistent in either resampling event for May 2006 and July 2007 samples. Both the 2006 and 2007 toxicities coincided with the only two chlorpyrifos exceedances to have occurred at Bear Creek @ Kibby Rd.

The Coalition since July 2007 conducted two consecutive years of monitoring with no *C. dubia* water column toxicity. Normal storm and irrigation monitoring occurred in 2007 and 2008. Normal Monitoring occurred during the storm and irrigation seasons in 2007 and 2008, and the Coalition also conducted MPM for *C. dubia* toxicity in May and July of 2010 and 2011—a total of 17 sampling events. Chlorpyrifos was sampled during four MPM events in 2010 and 2011, and no exceedances of the chlorpyrifos WQTL occurred. The end of two consecutive years of monitoring during months of past exceedances was July 2011.

Outreach

The Coalition initiated outreach in 2007 and has since taken several actions to address water quality problems in Bear Creek @ Kibby Rd subwatershed. Actions include grower notification, management practice outreach and education, and management practice implementation and tracking.

In addition, Bear Creek @ Kibby Rd is one of the second priority sites to receive a focused, detailed approach to addressing its management plan constituents. The Coalition contacted growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity (growers with the potential to drain or drift to the creek and those applying constituents of concern). The Coalition conducted individual meetings with 14 growers in 2010 to review each grower's operation, document current management practices, and discuss water quality problems, including lower priority management plan constituents such as DO. The Coalition encouraged growers to evaluate their farming operations to eliminate off-site movement of pesticides. Management practices were recommended if they could be effective in eliminating/reducing agricultural discharges. All targeted growers were contacted again in 2011 to determine if recommended and/or new practices were implemented.

Based on survey and follow up results, targeted growers in the Bear Creek @ Kibby Rd subwatershed implemented management practices and improved water quality as reflected by the absence of exceedances of the WQTLs for chlorpyrifos, DO and *C. dubia* water column toxicity.

The Coalition continues to provide outreach to all members within the Bear Creek @ Kibby Rd site subwatershed. Through grower notifications and meetings, members continue to be made aware of water quality results, relevant management practices to address water quality concerns, availability of funding for management practice implementation, results of studies of management practice efficacy, and management practice implementation and tracking activities. In addition, Bear Creek @ Kibby Rd remains a high priority subwatershed for other constituents and outreach continues with growers who have the greatest likelihood of contributing to exceedances. Through continued outreach the Coalition informs growers of water quality problems which will prevent the reoccurrence of chlorpyrifos, DO and *C. dubia* water column toxicity exceedances.

Future Monitoring

Assessment Monitoring is scheduled for Bear Creek @ Kibby Rd in 2025 through 2026. During this time, the Coalition will monitor monthly for chlorpyrifos, DO and *C. dubia* water column toxicity. Management Plan Monitoring will continue to take place for other high priority constituents during months of past exceedances through 2012 as necessary to assess the effect of outreach on water quality.

Justification to Remove Constituents from Bear Creek @ Kibby Rd Management Plan

The Coalition addressed management plan constituents within the Bear Creek @ Kibby Rd subwatershed with a focused approach for sourcing past exceedances and conducting individual outreach with

targeted growers. The result is the implementation of new management practices as well as increased grower awareness of the role of agriculture in causing water quality problems. Management Plan Monitoring results indicate two consecutive years of no exceedances of the WQTLs for chlorpyrifos, DO and *C. dubia* water column toxicity. Therefore the Coalition requests that chlorpyrifos, DO and *C. dubia* water column toxicity be removed from the Bear Creek @ Kibby Rd management plan and MPM schedule.

The Coalition believes outreach within the Bear Creek @ Kibby Rd subwatershed will continue to keep growers aware of potential water quality problems due to agriculture. In addition, the Coalition is scheduled for monthly Assessment Monitoring in 2025 and 2026.

Cottonwood Creek @ Rd 20

Constituents Requested to Remove from Management Plan:

- Diazinon
- Diuron

Subwatershed Overview and Monitoring History

Under the current ESJWQC 2008 MRPP, Cottonwood Creek @ Rd 20 is the Core Monitoring location in Zone 6. Monitoring at Cottonwood Creek @ Rd 20 began during the storm season of 2005 and continued through fall 2011. In 2006, 2007 and 2008 normal irrigation and storm monitoring took place. Core constituents were monitored at Cottonwood Creek @ Rd 20 beginning in the fall of 2008 through the fall 2010. Assessment Monitoring was initiated in 2011 and is scheduled to occur every third year thereafter (2014, 2017). Core Monitoring will resume at this site in 2012.

The Cottonwood Creek @ Rd 20 subwatershed includes an upstream location (Cottonwood Creek @ Hwy 145) which was sampled during the irrigation seasons of 2007 and 2008.

The Coalition began conducting outreach and education in the Cottonwood Creek @ Rd 20 subwatershed in 2007. Management Plan Monitoring for high priority constituents was scheduled in 2007 and 2008. During 2009, Core Monitoring took place and no MPM samples were collected at that time (five dry and one event with non contiguous puddles). In January 2010, the Coalition began additional MPM in January, February and March (previously MPM was limited to irrigation months). The Coalition monitored for diazinon and diuron in January and February2010 and Assessment Monitoring occurred in 2011. Cottonwood Creek @ Rd 20 is one of the Coalition's second set of high priority management plan subwatersheds (focused outreach 2010-2012). Management Plan Monitoring for high priority management plan constituents occurred from 2010 (Year 1) through 2011 (Year 2) during months of past exceedances. In 2010, there were four dry and two events with non contiguous water and in 2011 both the November and December sampling events were dry.

The Coalition identified growers with the greatest likelihood of contributing to the water quality problems. The Coalition contacted these growers in 2009 and 2010 to document current management practices and encouraged the implementation of additional management practices designed to eliminate water quality problems. The Coalition followed up with targeted growers in 2011 to determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

Diazinon

The Regional Board established a TMDL for diazinon for the ESJWQC region (Lower San Joaquin River Chlorpyrifos and Diazinon TMDL); consequently, diazinon is considered one of the highest priority constituents under the Coalition's Management Plan. There was one exceedance of the diazinon WQTL at Cottonwood Creek @ Rd 20 in February 2008.

Beginning in October 2008, only Core Monitoring constituents were sampled. In January 2010 MPM was initiated for diazinon. Since the single exceedance of the diazinon WQTL in February 2008, the Cottonwood Creek @ Rd 20 monitoring location has been sampled for diazinon 21 times; two of those samples were collected during February storm events (month of past exceedance); however, the site was dry during the February 2010 storm event. MPM occurred during months of past exceedances in 2010 (February) and Assessment Monitoring occurred monthly in 2011. There were no exceedances of the diazinon WQTL in samples collected from Cottonwood Creek @ Rd 20 during 2010 or 2011 (lab data through October 2011). The PUR data indicate a decreasing trend in pounds of diazinon applied in the subwatershed since 2005. The greatest amount of diazinon applied was in 2005 (1,088 lbs AI across 534 acres) and the lowest amount of diazinon applied was in 2010 (197 lbs AI across 107 acres). The end of two consecutive years of monitoring during months of past exceedances was February 2011.

Diuron

Diuron is a soluble herbicide applied throughout the year, and is considered to be a high priority constituent under the Coalition's Management Plan. Samples containing diuron exceeded the WQTL twice at the Cottonwood Creek @ Rd 20 site subwatershed; both exceedances occurred during 2008 storm events (January and February).

Since the most recent diuron exceedance in February 2008, samples have been collected for diuron analysis 21 times. Three of those samples were collected during storm events. In addition to MPM during months of past exceedances, this site was sampled monthly during normal irrigation and storm monitoring in 2008 and during monthly Assessment Monitoring in 2011. The Coalition conducted MPM for diuron in January and February 2010 and 2011. There were no exceedances of the diuron WQTL in any sample collected from Cottonwood Creek @ Rd 20 in 2008, 2010 or 2011 (lab data through October 2011). The PUR data indicate that since 2006 there has been a considerable decrease in diuron applications and acres treated in the subwatershed. The largest amount of diuron applied was in 2006 (3,447 lbs AI across 4,208 acres) and the lowest amount of diuron applied was in 2010 (1,109 lbs AI across 969 acres). The end of two consecutive years of monitoring in months of past exceedances was February 2011.

Outreach

The Coalition initiated outreach in 2007 and has taken several actions to address water quality problems in the Cottonwood Creek @ Rd 20 subwatershed. Actions include grower notification, management practice outreach and education, and tracking of management practice implementation.

Cottonwood Creek @ Rd 20 is one of the second priority sites to receive a focused, detailed approach to addressing its management plan constituents. The Coalition contacts growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity (growers with the potential to drain or drift to the creek and those applying constituents of concern). The Coalition conducted individual meetings with 25 growers in 2009 and 2010 to review each grower's operation and document current management practices as well as discuss water quality problems. The Coalition encouraged growers to evaluate their farming operations to

eliminate off-site movement of pesticides. Management practices were recommended to eliminate agricultural discharges. All targeted growers were contacted again in 2011 to assess if recommended and/or new practices were implemented.

Based on survey and follow up results, targeted growers in the Cottonwood Creek @ Rd 20 subwatershed implemented management practices that successfully improved water quality. Improved water quality is reflected by the absence of exceedances of the WQTLs for diazinon and diuron.

The Coalition continues to provide general outreach to all members within the Cottonwood Creek @ Rd 20 subwatershed. Through grower notifications and meetings, members continue to be made aware of water quality results, management practices to eliminate water quality problems, availability of funding for management practice implementation, results of studies of management practice efficacy, and management practice implementation and tracking activities. In addition, Cottonwood Creek @ Rd 20 remains a high priority subwatershed for other constituents and outreach continues with growers who have the greatest likelihood of contributing to exceedances. Through outreach the Coalition will continue to inform growers of water quality problems which will prevent the reoccurrence of diazinon and diuron exceedances.

Future Monitoring

Cottonwood Creek @ Rd 20 is scheduled to resume Core Monitoring in 2012 under the current MRPP. Assessment Monitoring takes place every third year and is scheduled again in 2014. Management Plan Monitoring will continue to take place for high priority constituents during months of past exceedances through 2012 as necessary to assess the effect of outreach on water quality.

Justification to Remove Constituents from Cottonwood Creek @ Rd 20 Management Plan

The Coalition addressed management plan constituents within the Cottonwood Creek @ Rd 20 subwatershed with a focused, detailed approach for sourcing past exceedances and conducted outreach with targeted growers. Management Plan Monitoring results demonstrate at least two consecutive years of no exceedances of the WQTLs for diazinon and diuron. Therefore, the Coalition requests that diazinon and diuron be removed from the Cottonwood Creek @ Rd 20 management plan and MPM schedule.

The Coalition believes its outreach in the Cottonwood Creek @ Rd 20 subwatershed will continue to keep growers informed of water quality problems due to agriculture. Monthly Assessment Monitoring in 2014 will include the monitoring of diazinon and diuron and will allow the Coalition to further evaluate water quality at the Cottonwood Creek @ Rd 20 subwatershed with respect to these and other priority constituents.

Deadman Creek @ Gurr Rd

Constituents Requested to Remove from Management Plan:

- Copper

Subwatershed Overview and Monitoring History

Under the current ESJWQC 2008 MRPP, starting in October 2008, Deadman Creek @ Gurr Rd became one of the rotating Assessment Monitoring locations in the Duck Slough @ Gurr Rd Zone (Zone 5). Monitoring at Deadman Creek @ Gurr Rd began during the irrigation season of 2004. Monitoring was not conducted during 2005 or in the storm season of 2006; however, monitoring resumed during the 2006 irrigation season and continued through fall 2010. Five years of monitoring for Assessment constituents has taken place. Deadman Creek @ Gurr Rd was not sampled in 2011, but Assessment Monitoring is scheduled for 2017 through 2018.

Deadman Creek @ Gurr Rd is one of the Coalition's forth set of high priority management plan subwatersheds (focused outreach 2012-2014). During 2008 and 2010, MPM took place for high priority constituents during months of past exceedances. In addition, the Coalition identified growers with the greatest likelihood of contributing to the water quality problems including growers farming parcels with the potential for direct drainage to the creek and growers who applied high priority constituents in the past. The Coalition will initiate contacts with targeted growers in Deadman Creek @ Gurr Rd subwatershed in early 2012 to document current management practices and encourage the implementation of additional management practices designed to eliminate water quality problems.

Constituent Monitoring Results and Sourcing

Copper

Copper is routinely used by agriculture on a number of crops and may be found in surface waters as a result of applications. In October 2008, the Coalition began monitoring for both the total and dissolved copper fractions to better characterize copper contamination and more accurately estimate the bioavailable fraction of metal in the water column. Samples containing copper exceeded the hardness based WQTL four times in the Deadman Creek @ Gurr Rd subwatershed, in 2007 (February, April and May) and in 2008 (January). All four of the copper exceedances were based on the total fraction and occurred before the Coalition began monitoring for both the total and dissolved fractions.

Copper was added to the Deadman Creek @ Gurr Rd management plan in 2008 as a result of the exceedances in 2007. Additional MPM for copper in 2008 occurred during April and May and there were no exceedances. Since the January 2008 exceedance, copper has been monitored 36 times, 13 of those were during months of previous exceedances (January, February, April and May). No exceedances of the copper WQTL occurred in Normal Monitoring or MPM samples collected from Deadman Creek in 2008 (February through December) or in 2009-2010 (January through December).

Outreach

The Coalition initiated outreach in 2007 and has taken several actions to address water quality problems in the subwatershed. Actions include grower notification, management practice outreach and education, and management practice implementation and tracking. Through Coalition mailings and meetings/workshops, growers were made aware of downstream water and sediment quality problems as well as the importance of implementing management practices on their farms. The Coalition continues outreach and education in the subwatershed to keep growers informed of emerging water quality concerns and relevant regulations, opportunities for funding the implementation of management practices, and results of special studies such as management practice efficacy.

The Deadman Creek @ Gurr Rd site subwatershed is one of the fourth high priority subwatersheds (2012-2014) to receive a focused, detailed approach to addressing its management plan constituents. The Coalition contacts growers with the greatest likelihood of contributing to exceedances of high priority constituents. During outreach the Coalition encourages growers to evaluate their farming operations in order to eliminate off-site movement of pesticides. Additionally, in May 2011, the Coalition sent out mailings to members within the subwatershed to summarize water quality concerns and urge growers to implement appropriate management practices.

The Coalition believes that outreach and education led to improved water quality with respect to copper exceedances in Deadman Creek @ Gurr Rd. The Coalition plans to continue outreach to all members within the Deadman Creek @ Gurr Rd site subwatershed. In addition, this subwatershed will begin high priority MPM in 2012 (Year 1) through 2014 for other constituents of concern and focused outreach will continue with growers with the greatest likelihood of contributing to those exceedances. Through outreach the Coalition will keep growers informed of water quality problems and prevent the reoccurrence of exceedances of the copper WQTL in the Deadman Creek @ Gurr Rd subwatershed.

Future Monitoring

Assessment Monitoring is scheduled for Deadman Creek @ Gurr Rd in 2017 and 2018. Management Plan Monitoring is scheduled to take place for high priority constituents during months of past exceedances from 2012 through 2014 to assess the effect of outreach on water quality.

Justification to Remove Constituents from Deadman Creek @ Gurr Rd Management Plan

Growers within the Deadman Creek @ Gurr Rd site subwatershed are aware of exceedances of the copper WQTL and have taken actions to eliminate these exceedances. Monitoring in Deadman Creek @ Gurr Rd indicate two consecutive years without exceedances. Therefore the Coalition requests that copper be removed from the Deadman Creek @ Gurr Rd management plan and from the MPM schedule.

The Deadman Creek @ Gurr Rd subwatershed will begin its first year of focused outreach to address high priority constituents within its management plan in 2012. Actions include contacting growers with a potential to impact water quality to review management practices.

In addition, the Coalition believes its outreach within the Deadman Creek @ Gurr Rd subwatershed will continue to inform growers of water quality problems due to agriculture. Management Plan Monitoring in 2012 will take place for other high priority constituents and Assessment Monitoring in 2017 includes copper and will allow the Coalition to continue evaluating water quality at Deadman Creek @ Gurr Rd.

Dry Creek @ Wellsford Rd

Constituents Requested to Remove from Management Plan:

- Copper
- Diuron
- Specific Conductance (SC)
- *Selenastrum capricornutum* water column toxicity

Subwatershed Overview and Monitoring History

The Dry Creek @ Wellsford Rd site subwatershed is the Core Monitoring location in Zone 1. Monitoring at Dry Creek @ Wellsford Rd was initiated during the storm season of 2005 and has continued uninterrupted through 2011. Assessment Monitoring at this site occurred in 2011 and is scheduled to recur every third year (e.g. 2014, 2017). Core Monitoring will resume at this location in 2012 and continue through 2013. Additional monitoring occurred at the site in 2007, and an upstream location, Dry Creek @ Waterford Rd was sampled for management plan constituents during 2008.

The Dry Creek @ Wellsford Rd site subwatershed is one of the Coalition's first set of high priority management plan subwatersheds (focused outreach 2008-2010). Management Plan Monitoring for high priority constituents occurred from 2009 through 2011 during months of past exceedances. In addition, the Coalition identified growers with the greatest likelihood of contributing to the water quality problems (growers farming parcels with the potential for direct drainage to the creek and growers who have applied high priority constituents in the past). The Coalition contacted these growers in 2009 and 2010 to document management practices and encouraged the implementation of additional management practices designed to eliminate water quality problems. The Coalition followed up with all targeted growers to determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

Copper

Samples containing copper exceeded the hardness based WQTL three times in 2007 (February and April) and 2008 (February). However, all three of the copper exceedances were of the total fraction and occurred before the Coalition began monitoring for both the total and dissolved fractions. Since the February 2008 copper exceedance, the Coalition analyzed for copper during 20 events (through December 2011) at Dry Creek @ Wellsford and there were no exceedances of the WQTL (2011 lab results through October). Of the 20 events, three were storm events (February and April 2010 and February 2011). Since the most recent exceedance, monitoring has included Normal Monitoring in the 2008 irrigation season, Core Monitoring in 2009, MPM in 2010 and Assessment Monitoring in 2011. Sampling occurred twice and three times respectively during the months of February and April (months of past exceedances).

The PUR data indicate that from 2005 to 2010, copper use dropped substantially in the Dry Creek @ Wellsford Rd subwatershed. The amount of copper applied within the subwatershed decreased from

2005 (29,768 lbs AI across 7,847 acres) to 2010 (18,762 lbs AI across 6,646 acres). The end of two consecutive years of monitoring with no exceedances was April 2011.

Diuron

Samples with diuron exceeded the WQTL twice during two separate storm events in February 2007. Since the most recent exceedance, the Coalition scheduled diuron monitoring for 27 events through December 2011. Of the 27 events, four were storm events (January and February 2008, February 2010 and February 2011). Monitoring at the site has included Normal Monitoring during the 2008 irrigation season, Core Monitoring in 2009, MPM during 2010 and Assessment Monitoring during 2011. Monitoring occurred during the month of February three times since the most recent exceedance. Diuron has not exceeded the WQTL in any of the samples collected since the February 2007 exceedances (lab results through October 2011). There were no detections of diuron in samples since April 2008.

The PUR data indicate a decrease in diuron applications and acres treated in the Dry Creek @ Wellsford Rd site subwatershed between 2004 and 2010. The largest amount of diuron applied within the subwatershed was in 2004 (1,344 lbs AI across 1,091acres) with a marked decrease in 2010 (688 lbs AI across 1,770 acres). The end of two consecutive years of monitoring with no exceedance was February 2011.

Specific Conductance (SC)

The Regional Board has established a TMDL for salt and boron in waterways to which ESJWQC drains. Exceedances of the WQTL for SC can be caused by various factors and determining the exact source(s) of exceedances is exceptionally difficult. Given this difficulty, SC is categorized as one of the lowest priority constituents. A single exceedance of SC occurred at Dry Creek @ Wellsford Rd (January 2009). Specific Conductance is a field parameter, is measured during every sampling event, and has been measured at least once a month since October 2008 (initiation of 2008 MRPP). Since the January 2009 exceedance, the Coalition monitored SC at Dry Creek @ Wellsford Rd 37 times through December 2011 and none of the measurements have exceeded the WQTL (two of 37 events were during January). January 2011 marked the end of two consecutive years of monitoring.

Selenastrum capricornutum water column toxicity

Water column toxicity to *S. capricornutum* is indicative of herbicides, algaecides or fungicides in surface waters. Since there were exceedances of the WQTLs for both copper and diuron in the past, *S. capricornutum* was categorized as a high level priority constituent. *S. capricornutum* water column toxicity occurred four times in the Dry Creek @ Wellsford Rd subwatershed, three times in 2007 (February storm events) and once in 2008 (February storm event). During February 2007, the first storm event samples tested toxic to *S. capricornutum* (52% growth compared to control) and toxicity was persistent in the resample (16% growth compared to control) the TIE indicated that toxicity was caused by non-polar organics and metals. Samples collected during a second storm event in February 2007 tested toxic to *S. capricornutum* (32% growth compared to control, resample not toxic); the TIE indicated that the toxicity was caused by non-polar organics and metals. The February 2008 toxicity

(33% growth compared to the control) TIE indicated that non-polar organics was the probable cause of toxicity and the resample indicated that the toxicity was not persistent. Two of the *S. capricornutum* toxicities coincided with exceedances of copper (February 2007-second storm event and February 2008 storm event) and exceedances of diuron also coincided with the two storm event toxicities in February 2007.

Since the most recent toxicity in February 2008, the Coalition monitored Dry Creek @ Wellsford Rd 20 times for *S. capricornutum* toxicity and no samples caused toxicity (of those 20, two were from February storm events). Sampling included Normal Monitoring for the remainder of the irrigation season in 2008 and in 2010 through 2011. The end of two consecutive years of monitoring during months of past exceedances was February 2011.

Outreach

The Dry Creek @ Wellsford Rd site subwatershed is one of the first high priority site subwatersheds to receive a focused, detailed approach to addressing its management plan constituents. The Coalition's strategy for outreach is to contact growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity. The Coalition conducted individual meetings with 25 growers in 2009 and 2010 to review each grower's operation and document current management practices as well as discuss water quality problems, including copper, diuron, SC and *S. capricornutum* water column toxicity. The Coalition encouraged growers to evaluate their farming operations to eliminate off-site movement of pesticides, and management practices were recommended that are effective in eliminating agricultural discharges. All targeted growers were contacted again to assess if recommended and/or new practices were implemented.

As a result of outreach, targeted growers are more aware of water quality problems in the Dry Creek @ Wellsford Rd subwatershed and have made adjustments to their operations, including implementing new management practices. These resulted in improved water quality as indicated by the absence of exceedances of the WQTLs for copper, diuron, SC and *S. capricornutum* water column toxicity.

The Coalition continues to provide outreach to all members within the subwatershed. Through grower notifications and grower meetings, members continue to be informed of water quality results, relevant management practices that can eliminate water quality problems, availability of funding to assist in the implementation of management practices, results of studies of management practice efficacy, and management practice implementation and tracking activities. In addition, this subwatershed remains a high priority subwatershed for other constituents and outreach continues with growers who have the greatest likelihood of contributing to those exceedances. Through outreach the Coalition continues to make growers aware of water quality problems which will prevent the reoccurrence of exceedances of copper, diuron, SC and *S. capricornutum* water column toxicity.

Future Monitoring

Core Monitoring will resume at this location in 2012 and continue through 2013. Assessment Monitoring at this site occurred in 2011 and is scheduled to recur every third year (e.g. 2014, 2017).

During this time, the Coalition will monitor monthly for copper, diuron, SC and *S. capricornutum* water column toxicity. In addition, MPM is scheduled to take place for other high priority constituents in 2012 during months of past exceedances to assess water quality.

Justification to Remove Constituents from Dry Creek @ Wellsford Rd Management Plan

The Coalition addressed the management plan constituents within the Dry Creek @ Wellsford Rd subwatershed with a focused, detailed approach for sourcing past exceedances and conducting individual outreach with targeted growers. The result is the implementation of new management practices as well as increased grower awareness of the role of agriculture in causing water quality problems. Management Plan Monitoring results indicate two consecutive years of no exceedances of the WQTLs for copper, diuron, SC and *S. capricornutum* water column toxicity. Therefore the Coalition requests that copper, diuron, SC and *S. capricornutum* water column toxicity be removed from the Dry Creek @ Wellsford Rd management plan and MPM schedule.

The Coalition believes its outreach within the Dry Creek @ Wellsford Rd subwatershed will continue to keep growers informed of water quality problems due to agriculture. In addition, the Coalition will continue MPM at the site for other high priority constituents and is scheduled to conduct monthly Assessment Monitoring for all constituents in 2014 which will allow the Coalition to continue evaluating water quality at the Dry Creek @ Wellsford Rd site subwatershed.

Duck Slough @ Gurr Rd

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos
- Specific Conductance (SC)
- Total Dissolved Solids (TDS)
- *Selenastrum capricornutum* water column toxicity

Subwatershed Overview and Monitoring History

Under the current ESJWQC 2008 MRPP, Duck Slough @ Gurr Rd is the Core Monitoring location in Zone 5. Monitoring at Duck Slough @ Gurr Rd began during the irrigation season of 2004 and continued through fall 2011. In 2006, 2007 and 2008 normal irrigation and storm monitoring was conducted. Core constituents were monitored at Duck Slough @ Gurr Rd beginning in the fall of 2008 through the fall 2010. Assessment Monitoring was initiated in 2011 and is scheduled to occur every third year thereafter (e.g. 2014, 2017). Core Monitoring will resume at this site in 2012.

There are two upstream monitoring locations in the Duck Slough @ Gurr Rd subwatershed: Duck Slough @ Hwy 59 and North Slough @ Hwy 59. In 2008, upstream MPM occurred at Duck Slough @ Hwy 59 for *S. capricornutum* water column toxicity (July and September). Upstream monitoring also occurred in 2008 at North Slough @ Hwy 59 for *S. capricornutum* water column toxicity (July and September); the site was dry for both monitoring events. Upstream monitoring ended after the September 2008 monitoring events.

The Duck Slough @ Gurr Rd site subwatershed is one of the Coalition's second set of high priority management plan subwatersheds (focused outreach 2010-2012). The Duck Slough @ Gurr Rd management plan was established in 2007. Management Plan Monitoring for high priority management plan constituents took place at Duck Slough @ Gurr Rd in 2007 (June and July) and at upstream locations in 2008 (June, July and September). During 2009, Core Monitoring took place and no MPM samples were collected. Management Plan Monitoring for high priority management plan constituents occurred from 2010 (Year 1) through 2011 (Year 2) during months of past exceedances.

In addition, the Coalition identified growers with the greatest likelihood of contributing to the water quality problems. The Coalition contacted these growers in 2010 to document their current management practices and encouraged the implementation of additional management practices designed to eliminate water quality problems in Duck Slough. The Coalition followed up with targeted growers in 2011 determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

A single exceedance of the chlorpyrifos WQTL occurred at Duck Slough @ Gurr Rd in July 2004. Since the 2004 chlorpyrifos exceedance, the Duck Slough @ Gurr Rd monitoring location was sampled for

chlorpyrifos 55 times; seven of those samples were collected during July sampling events (month of past exceedance). In addition to MPM during months of past exceedances, this location was sampled monthly during storm and irrigation monitoring in 2006, 2007 and 2008. High priority MPM occurred during months of past exceedances for chlorpyrifos in 2010 (April and July) and Assessment Monitoring was conducted monthly in 2011. There were no exceedances of the chlorpyrifos WQTL in samples collected from Duck Slough @ Gurr Rd 2006, 2007 and 2008 (during the storm and irrigation seasons), 2010 (MPM) or 2011 (monthly Assessment Monitoring, lab results through October 2011).

Specific Conductance (SC)

There were three exceedances of the SC WQTL in Duck Slough since monitoring was initiated in 2004, two of the exceedances occurred at the Duck Slough @ Gurr Rd (September 2004 and November 2009) location while one occurred at the upstream location Duck Slough @ Hwy 59 (May 2008).

Specific conductance is a field parameter and all field parameters are measured during each monitoring event (Core Monitoring, Assessment Monitoring and MPM). Therefore, monitoring for SC occurred at Duck Slough @ Gurr Rd during each monitoring event and will continue for all future sampling events. Since November 2009 there have been no exceedances of SC in 26 events at Duck Slough @ Gurr Rd. As of November 2011, there were two consecutive years of no exceedances.

Total Dissolved Solids (TDS)

The Regional Board has established a TMDL for salt and boron in waterways to which ESJWQC drains. Concentrations of TDS are the result of processes occurring in the water column and sediment which can vary diurnally and seasonally. Since sourcing and linking exceedances of TDS can be very difficult, the Coalition has categorized TDS as a low priority constituent. There has been one TDS exceedance of the WQTL to occur at the Duck Slough @ Gurr Rd site subwatershed during September 2004.

Since the 2004 exceedance, the Coalition has demonstrated over two years of consecutive monitoring with no exceedances of the WQTL for TDS. The Coalition has sampled for TDS 69 times in the Duck Slough @ Gurr Rd subwatershed since the September 2004 exceedance (site was dry during three of 69 events). Seven of the samples collected were during September (month of past exceedance). The end of two consecutive years of monitoring during months of past exceedances was September 2008.

Selenastrum capricornutum water column toxicity

Water column toxicity to *S. capricornutum* combined with exceedances of the WQTL for copper in the past at Duck Slough @ Gurr Rd, resulted in *S. capricornutum* toxicity being categorized as a high priority constituent. Toxicity to *S. capricornutum* occurred twice at Duck Slough @ Gurr Rd, once in 2004 (September) and once in 2007 (July). A TIE was initiated only if algal growth was less than 50% compared to the control. Neither the 2004 (74% growth compared to the control) or 2007 (74% growth compared to the control) toxicities required a TIE. The resample collected from the July 2007 event indicated that the toxicity was not persistent.

Since the most recent toxicity in July 2007, there were two consecutive years of monitoring with no toxicity to *S. capricornutum.* The Coalition monitored for *S. capricornutum* 25 times at Duck Slough @ Gurr Rd since the July 2007 toxicity, including monthly sampling that occurred in 2008 (during the storm and irrigation season) and 2011 Assessment Monitoring (lab results through October 2011). None of the samples were toxic to *S. capricornutum,* including eight samples collected during months of past exceedances (four collected in July including the resample and September). The end of two consecutive years of monitoring during months of past exceedances was September 2011.

Outreach

The Coalition initiated outreach in 2007 and took several actions to address water quality problems in the Duck Slough @ Gurr Rd subwatershed. Actions included grower notification, management practice outreach and education, and tracking of management practice implementation.

Duck Slough @ Gurr Rd is one of the second priority sites to receive a focused, detailed approach to addressing its management plan constituents. The Coalition's strategy for outreach is to contact growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity (growers with the potential to drain or drift to the creek and those applying constituents of concern). The Coalition conducted individual meetings with six targeted growers in 2010 to review each grower's operation and document their current management practices as well as discuss water quality problems, including lower priority management plan constituents such as SC and TDS. The Coalition encouraged growers to evaluate their farming operations in order to eliminate off-site movement of pesticides. Management practices were recommended if they could be effective in eliminating agricultural discharges. All six targeted growers were contacted again in 2011 to assess if recommended and/or new practices were implemented.

Based on survey and follow up results, targeted growers in the Duck Slough @ Gurr Rd subwatershed implemented management practices that improved water quality as indicated by the absence of exceedances of the WQTLs for chlorpyrifos, SC, TDS and *S. capricornutum* water column toxicity.

The Coalition continues to provide outreach to all members within the Duck Slough @ Gurr Rd site subwatershed. Through grower notifications and meetings, members continue to be made aware of water quality results, management practices to eliminate water quality concerns, availability of funding to assist in the implementation of management practices, results of special studies of management practice efficacy, and management practice implementation and tracking activities. Duck Slough @ Gurr Rd remains a high priority subwatershed for other constituents and outreach continues with growers who have the greatest likelihood of contributing to exceedances. Through outreach the Coalition will continue to inform growers of water quality problems which will prevent the reoccurrence of chlorpyrifos, SC, TDS and *S. capricornutum* water column toxicity exceedances.

Future Monitoring

Duck Slough @ Gurr Rd is scheduled to resume Core Monitoring in 2012. Assessment Monitoring takes place every third year and is scheduled to occur again in 2014. Management Plan Monitoring will continue to take place through 2012 for high priority constituents during months of past exceedances as necessary to assess water quality.

Justification to Remove Constituents from Duck Slough @ Gurr Rd Management Plan

The Coalition addressed the management plan constituents within the Duck Slough @ Gurr Rd subwatershed with a focused, detailed approach for sourcing past exceedances and conducted outreach with targeted growers. Management Plan Monitoring results indicate at least two consecutive years of no exceedances of the WQTLs for chlorpyrifos, SC, TDS and *S. capricornutum* water column toxicity. Therefore, the Coalition requests that chlorpyrifos, SC, TDS and *S. capricornutum* water column toxicity be removed from the Duck Slough @ Gurr Rd management plan and MPM schedule.

The Coalition believes its outreach in the Duck Slough @ Gurr Rd subwatershed will continue to keep growers aware of water quality problems due to agriculture. Monthly Assessment Monitoring in 2014 will include the monitoring of chlorpyrifos, SC, TDS and *S. capricornutum* water column toxicity and will allow the Coalition to further evaluate water quality at the Duck Slough @ Gurr Rd subwatershed.

Duck Slough @ Hwy 99

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos
- Dissolved Oxygen (DO)
- *Selenastrum capricornutum* water column toxicity

Subwatershed Overview and Monitoring History

The Duck Slough @ Hwy 99 site subwatershed is a rotating Assessment Monitoring location within the Duck Slough @ Gurr Rd Zone (Zone 5). Sampling was initiated at this location during the storm season of 2005 and continued through the end of the irrigation season of 2008. The site is not scheduled for Assessment Monitoring until 2013 and 2014; however, MPM occurred at the site from 2007 through 2011. An upstream location, Duck Slough @ Whealan Rd, was sampled for management plan constituents during 2008.

The Duck Slough @ Hwy 99 site subwatershed is one of the Coalition's first set of high priority management plan subwatersheds (focused outreach 2008-2010). Management Plan Monitoring for high priority constituents occurred from 2007 through 2011 during months of past exceedances. In addition, the Coalition identified growers with the greatest likelihood of contributing to the water quality problems. The Coalition contacted these growers in 2009 to document their current management practices and encouraged the implementation of additional management practices designed to eliminate water quality problems in Duck Slough. The Coalition followed up with all targeted growers to determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

Chlorpyrifos exceeded the WQTL four times in samples collected from the Duck Slough @ Hwy 99 subwatershed. All exceedances occurred during the irrigation season (July 2005, May 2006, July 2007 and September 2008).

Since the most recent exceedance in September 2008, the Coalition conducted MPM for chlorpyrifos in May, July and September of 2009, 2010 and 2011 at Duck Slough @ Hwy 99 during nine sampling events. Chlorpyrifos did not exceed the WQTL in any of the nine events. The end of two consecutive years of monitoring with no exceedances was September 2010.

In addition, PUR data indicates a decline in chlorpyrifos use in the Duck Slough @ Hwy 99 subwatershed. Chlorpyrifos use peaked in 2005 (4,684 lbs AI across 1,537 acres) and application rates declined in 2006, but remained relatively stable through 2008 when the most recent exceedance in the waterway occurred (1,113 lbs AI across 1,539 acres). Chlorpyrifos use in 2009 and 2010 (295 lbs AI across 466 acres) continued to follow a declining trend in Duck Slough @ Hwy 99.

Dissolved Oxygen (DO)

Only two exceedances of dissolved oxygen occurred in the Duck Slough @ Hwy 99 subwatershed (September 2006 and June 2009). Since the most recent exceedance in June 2009, the Coalition measured dissolved oxygen 16 times at Duck Slough @ Hwy 99 and no exceedances the WQTL occurred. Of these 16 events, two were during June and three during September (months of past exceedances). June 2009 marked the end of two consecutive years of monitoring with no exceedances.

Selenastrum capricornutum water column toxicity

S. capricornutum toxicity occurred twice in the Duck Slough @ Hwy 99 subwatershed in samples collected during July 2005 and April 2008. The July 2005 toxicity (77% growth compared to control) was not persistent in the resample collected a week later. Toxicity in April 2008 (86% growth compared to control) was not considered ecologically relevant; however, the resample indicated persistent toxicity a week later (5% growth compared to control). Toxicity Identification Evaluations were not run on any of the samples. Copper is a constituent of concern in the Duck Slough @ Hwy 99 subwatershed; nevertheless, neither of the *S. capricornutum* toxicities coincided with a copper exceedance. No exceedances of herbicides have occurred in the Duck Slough @ Hwy 99 subwatershed.

Since the most recent exceedance in April 2008, the Coalition has monitored Duck Slough @ Hwy 99 10 times for *S. capricornutum* water column toxicity and none of the samples resulted in toxicity. Sampling included Normal Monitoring during the remainder of the irrigation season in 2008 and MPM in 2009 through 2011; the months of April and July were sampled for three events each. The end of two consecutive years of monitoring during months of past exceedances was July 2011.

Outreach

The Duck Slough @ Hwy 99 site subwatershed is one of the first high priority site subwatersheds to receive a focused, detailed approach to addressing its management plan constituents. The Coalition's strategy for outreach is to contact growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity. The Coalition conducted individual meetings with 24 targeted growers in 2008 and 2009 to review each grower's operation and document their current management practices as well as discuss water quality concerns, including chlorpyrifos, DO and *S. capricornutum* toxicity. The Coalition encouraged growers to evaluate their farming operations to eliminate off-site movement of pesticides, and management practices were recommended if they could be effective in eliminating agricultural discharges. Twenty-two targeted growers were re-contacted the next year to determine if recommended and/or new practices were implemented.

As a result of outreach, growers are more aware of water quality problems in Duck Slough and made adjustments to their operations, including implementing new management practices, that improved water quality as indicated by the absence of chlorpyrifos, DO and *S. capricornutum* water column toxicity.

The Coalition continues to provide outreach to all members within the Duck Slough @ Hwy 99 site subwatershed. Through grower notifications and meetings, members continue receive water quality results, information on relevant management practices, availability of funding for implementing management practices, results of studies of management practice efficacy, and management practice implementation and tracking activities. In addition, this subwatershed remains a high priority subwatershed for other constituents and focused outreach continues with growers who have the greatest likelihood of contributing to those exceedances. Through outreach the Coalition will continue to make growers aware of water quality impairments which will prevent the reoccurrence of exceedances of chlorpyrifos and DO WQTLs and S. *capricornutum* toxicity.

Future Monitoring

Assessment Monitoring is scheduled for Duck Slough @ Hwy 99 in 2013 and 2014 and will include monthly monitoring for chlorpyrifos, DO and *S. capricornutum* toxicity.

Justification to Remove Constituents from Duck Slough @ Hwy 99 Management Plan

The Coalition addressed the management plan constituents within the Duck Slough @ Hwy 99 subwatershed with a focused, detailed approach for sourcing past exceedances and conducting individual outreach with targeted growers. The result is the implementation of new management practices as well as increased grower awareness of the role of agriculture in causing water quality impairments. The results of MPM demonstrate two consecutive years of no exceedances of the WQTLs for chlorpyrifos, DO and *S. capricornutum* water column toxicity. Therefore the Coalition requests that chlorpyrifos, DO and *S. capricornutum* water column toxicity be removed from the Duck Slough @ Hwy 99 management plan and MPM schedule.

The Coalition believes its outreach within the Duck Slough subwatershed will continue to inform growers of water quality problems due to agriculture. In addition, the Coalition will continue MPM at the site for other high priority constituents and is scheduled to conduct monthly Assessment Monitoring for all constituents in 2013 and 2014.

Highline Canal @ Highway 99

Constituents Requested to Remove from Management Plan:

- Ammonia
- Chlorpyrifos
- Copper
- Diuron
- pH
- Specific Conductance (SC)
- Total Dissolved Solids (TDS)

Subwatershed Overview and Monitoring History

The Highline Canal @ Hwy 99 site subwatershed is the Core Monitoring location in Zone 3. The Coalition initiated monitoring at the site during the irrigation season of 2005 and has monitored continually through 2011. Only Core Monitoring constituents were sampled at the site from October 2008 through 2010. Assessment Monitoring occurred at the site in 2011 and will occur again every third year (e.g. 2014, 2017). In addition, MPM occurred at the Highline Canal @ Hwy 99 site from 2007 through 2011.

Highline Canal @ Hwy 99 is one of the Coalition's second set of high priority management plan subwatersheds (focused outreach 2010-2012). Additional MPM occurred at the site in 2007 and 2008, and MPM during months of past exceedances occurred in 2009, 2010, and 2011 (in 2011 Assessment Monitoring occurred). The Coalition identified growers with the greatest likelihood of contributing to the water quality problems and contacted the growers in 2009 and 2010 to document their current management practices and encourage the implementation of additional management practices designed to eliminate water quality problems. The Coalition followed up with targeted growers in 2011 to determine which additional management practices were implemented.

The Coalition designated Highline Canal @ Lombardy Rd as another Assessment Monitoring site subwatershed on the same waterbody upstream of the Highline Canal @ Hwy 99 location. The Highline Canal @ Lombardy Rd site subwatershed is scheduled as one of the Coalition's fifth set of high priority management plan subwatersheds (focused outreach 2013-2015) and its management plan contains several of the same constituents currently in the Highline Canal @ Hwy 99 management plan. The Highline Canal @ Lombardy Rd subwatershed is discussed in detail in the next section.

Constituent Monitoring Results and Sourcing

Ammonia

The Coalition suspects that dairies are the major source of ammonia in the Coalition region. Although fertilizers applied to agricultural fields can contain ammonium, it is rapidly converted to nitrate. It is unlikely that the source of ammonia detected in surface waterways would be agricultural applications of fertilizer. Ammonia exceeded the WQTL twice in samples collected from Highline Canal @ Hwy 99 during consecutive storm events in January and February 2008. During both events, concentrations of *E.*

coli were also detected well above the WQTL (both results were >2,400 MPN/100 mL), which may be further evidence that the ammonia in the canal was from dairies.

The Coalition conducted more than two consecutive years of monitoring with no exceedances of ammonia. Because Highline Canal @ Hwy 99 is a Core Monitoring location, ammonia analysis has been conducted monthly since October 2008. Since the February 2008 storm event, the Coalition sampled for ammonia 45 times through December 2011 (lab results through October 2011). The site was dry for 10 of the 45 events. The months of January and February were scheduled for ammonia monitoring three times each since the most recent exceedance (site was dry in January 2009 and January and February 2011). Ammonia did not exceed the WQTL in any of the samples collected since February 2008 (lab results through October 2011). The end of two consecutive years of monitoring with no exceedances was February 2010.

Chlorpyrifos

Chlorpyrifos exceeded the WQTL five times at the Highline Canal @ Hwy 99 monitoring site during both the irrigation season (July 2007, 2008 and 2009) and storm events (two day, single storm event on February 28 and March 1, 2006 and January 2008). However, since the most recent exceedance in July 2009, there have been no detections of chlorpyrifos in samples collected from Highline Canal @ Hwy 99 (lab results through October 2011). The Coalition conducted MPM during months of past chlorpyrifos exceedances in 2010 and Assessment Monitoring in 2011, which includes 15 events through December 2011 (lab results through October 2011). The month of July was sampled twice and sampling occurred during three storm events (January and February 2010 and February 2011). During three sampling events the site was dry (January, February and December 2011). The end of two consecutive years of monitoring with no exceedances was July 2011.

The PUR data indicate that chlorpyrifos use declined from 2004 (18,307 lbs AI across 9,746 acres) to 2010 (9,334 lbs AI across 6,423 acres).

Copper

Copper exceedances occurred seven times in samples collected from Highline Canal @ Hwy 99 in 2007 (February, April, June and August) and 2008 (January and February). However, all copper exceedances were of the total fraction and occurred before the Coalition conducted monitoring for both the total and dissolved fractions of the constituent. The Coalition monitored for copper during 28 events at Highline Canal @ Hwy 99 since February 2008 and no copper exceedances occurred (the site was dry in January, February and December 2011; lab results through October 2011). Sampling since the most recent exceedance date included Normal Monitoring during the 2008 irrigation season, MPM during 2010 and Assessment Monitoring during 2011 and occurred during the months of January and February twice each and in the months of April, June, July and August four times each. The end of two consecutive years of monitoring with no copper exceedances was August 2011.

Pesticide Use Report data indicate that copper use actually increased in the Highline Canal @ Hwy 99 subwatershed in 2010 (70,066 lbs AI across 27,080 acres) compared to 2008 (35,255 lbs AI across 11,634 acres). Despite the upward trend, copper did not exceed the WQTL during 2009, 2010 or 2011 at Highline Canal @ Hwy 99. Interestingly, copper use follows the same upward trend since 2007 in the upstream Highline Canal @ Lombardy Rd subwatershed, and resulted in two exceedances of copper at Highline Canal @ Lombardy Rd site in 2010 and 2011 (both during February storm events). The Highline Canal @ Hwy 99 site was sampled during the same February 2010 and 2011 storm events, and copper did not exceed the WQTL.

Diuron

Diuron exceeded the WQTL twice during two separate storm events at Highline Canal @ Hwy 99 (February 2007 and January 2008). Since the most recent exceedance, the Coalition monitored diuron at Highline Canal @ Hwy 99 for 21 events through December 2011. Of the 21 events, four were storm events (February 2008, January and February 2010 and February 2011) and during three events the site was dry (January, February and December 2011). Monitoring included Normal Monitoring during the 2008 storm and irrigation seasons, MPM during 2010 and Assessment Monitoring during 2011. Since the most recent exceedance monitoring occurred during the month of January twice and during the month of February three times (months of past exceedances). Diuron did not exceed the WQTL in any samples collected since January 2008 (lab results through October 2011). February 2011 marked the end of two consecutive years of monitoring with no exceedances.

In addition, PUR data indicate that diuron use in Highline Canal @ Hwy 99 decreased over recent years. In 2007, 574 lbs AI were applied across 560 acres compared to 2010 with 67 lbs AI applied across 170 acres.

pH

Exceedances of the pH WQTL can be caused by various factors and determining the exact source(s) of exceedances is impossible. The Regional Board has not yet established a TMDL for pH in waterways to which the ESJWQC region drains; therefore, given the difficulty of sourcing exceedances, pH is one of the lowest priority constituents. Fourteen exceedances of pH have occurred at the Highline Canal @ Hwy 99 monitoring location during both storm and irrigation events (February, March, May, June, August, September and December).

Since pH is a field parameter measured during every sampling event and the Highline Canal @ Hwy 99 is a Core Monitoring location, the Coalition has been measuring pH at least once a month since the initiation of sampling under the 2008 MRPP (since October 2008). The most recent exceedance of pH was in December 2009, and the Coalition has since measured pH during 26 events through December 2011 (December 2010 and January, February and December 2011 were dry). None of the measurements exceeded the pH WQTL. The end of two consecutive years of monitoring was December 2011.

Specific Conductance (SC)

A single exceedance of SC occurred at the Highline Canal @ Hwy 99 monitoring site (storm event in February 2008). Like pH, SC is a field parameter, is measured during every sampling event, and has been measured at least once a month since October 2008 (initiation of 2008 MRPP). Since the most recent exceedance in February 2008, the Coalition measured SC at Highline Canal @ Hwy 99 58 times through December 2011, and none of the measurements exceeded the WQTL (eight of the 58 events were storm events; site was dry during 10 of the 58 events). February 2010 marked the end of two consecutive years of monitoring.

Total Dissolved Solids (TDS)

Two exceedances of the TDS WQTL have occurred in samples collected from Highline Canal @ Hwy 99 (January and February 2008, both storm events). Since the most recent exceedance in February 2008, the Coalition measured TDS 45 times, including Normal Monitoring during the irrigation season of 2008 and Core Monitoring from October 2008 through December 2011 (lab results through October 2011). During this period, the Coalition sampled eight storm events, three times each in January and February; the site was dry during ten events since February 2008. No exceedances of the TDS WQTL occurred during any of the monitoring events since the most recent exceedance date (lab results through October 2011). The end of two consecutive years of monitoring was February 2010.

Outreach

As mentioned above, Highline Canal @ Hwy 99 is one of the second set of high priority site subwatersheds to receive a focused, detailed approach to addressing its management plan constituents. The Coalition contacts growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity. The Coalition conducted individual meetings with 10 growers in 2009 and 2010 to review each grower's operation and document their current management practices as well as discuss water quality problems. The Coalition encouraged growers to evaluate their farming operations to eliminate off-site movement of pesticides and recommended implementing new management practices when it appeared they could be effective in eliminating discharges. Targeted growers were re-contacted the next year to determine if recommended and/or new practices were implemented.

Monitoring results indicate that growers eliminated water quality problems due to ammonia, chlorpyrifos, copper, diuron, pH, SC and TDS in the Highline Canal @ Hwy 99 subwatershed.

The Coalition continues to provide outreach to all members within the Highline Canal @ Hwy 99 site subwatershed. Through grower notifications and meetings, members continue to be informed about water quality results, are given information about management practices and the availability of funding for implementing new management practices, results of studies of management practice efficacy, and management practice implementation and tracking activities. This subwatershed remains a high priority subwatershed for other constituents and outreach will continue with growers through at least 2012. In addition, the upstream Highline Canal @ Lombardy Rd subwatershed is scheduled for focused outreach

beginning in 2013, which should lead to further improvement of the water quality in the Highline Canal. Through continued outreach, the Coalition will keep growers informed about water quality problems and prevent a reoccurrence of ammonia, chlorpyrifos, copper, diuron, pH, SC and TDS exceedances.

Future Monitoring

The Highline Canal @ Hwy 99 is a Core Monitoring location and will continue to be sampled monthly for ammonia, pH, SC and TDS. In addition, Assessment Monitoring is scheduled every third year, starting in 2014, and will include monthly analysis of chlorpyrifos, copper and diuron.

Justification to Remove Constituents from Highline Canal @ Hwy 99 Management Plan

The Coalition addressed the management plan constituents within the Highline Canal @ Hwy 99 subwatershed with a focused, detailed approach for sourcing past exceedances and conducting individual outreach with targeted growers. The result is the implementation of new management practices as well as increased grower awareness of the role of agriculture in causing water quality problems. Monitoring results (including monthly Assessment Monitoring during 2011) indicate two consecutive years with no exceedances of the WQTLs for ammonia, chlorpyrifos, copper, diuron, pH, SC and TDS. The Coalition therefore requests that ammonia, chlorpyrifos, copper, diuron, pH, SC and TDS be removed from the Highline Canal @ Hwy 99 management plan and MPM schedule.

The Coalition believes its outreach within the Highline Canal @ Hwy 99 subwatershed will continue to keep growers informed about water quality impairments due to agriculture. In addition, monitoring for all constituents is either ongoing (for Core Monitoring constituents) or scheduled in the near future (in 2014 for all constituents as a part of Assessment Monitoring), which will provide the Coalition with data to continue to evaluate water quality in the Highline Canal @ Hwy 99 subwatershed.

Highline Canal @ Lombardy Rd

Constituents Requested to Remove from Management Plan:

- Specific Conductance (SC)

Subwatershed Overview and Monitoring History

The Highline Canal @ Lombardy Rd site subwatershed is an Assessment Monitoring location in the Highline Canal @ Hwy 99 Zone (Zone 3) and is located upstream of the Highline Canal @ Hwy 99 site. Monitoring was initiated at this site during the 2005 storm season and continued through the 2008 irrigation season. Additional MPM occurred at the site in 2007 and 2008 and MPM during months of past exceedances was conducted in 2009 and 2010. Assessment Monitoring occurred at Highline Canal @ Lombardy Rd in 2011 and will continue through 2012.

The Coalition initiated outreach and education in the Highline Canal @ Lombardy Rd subwatershed in 2007 and it continues to the present. The Highline Canal @ Lombardy Rd subwatershed is one of the Coalition's fifth set of high priority management plan subwatersheds (focused outreach 2013-2015). The Coalition has yet to begin its focused outreach approach, but has conducted four years of MPM.

Constituent Monitoring Results and Sourcing

Specific Conductance (SC)

During the March 4, 2008 storm sediment monitoring event, an exceedance of SC occurred in the Highline Canal @ Lombardy Rd subwatershed. There was very little flow within the canal at the time of sampling, and the water had been evaporating and/or infiltrating into the ground since the last rainfall on February 24, 2008 (SC did not exceed the WQTL the week before on February 26, 2008 during the storm monitoring event). Since Highline Canal is a conveyance of the Turlock Irrigation District and is not a natural waterway, it typically only flows during the winter as a result of storm events and dries up shortly after rainfall stops.

Since the SC exceedance occurred, the Coalition has measured SC in the canal 33 times, including Normal Monitoring during the 2008 irrigation season, MPM during 2009 and 2010 and Assessment Monitoring during 2011. The Coalition has sampled in March three times since the exceedance in 2008 and sampled during four storm events (storm resample event in March 2008, January and February 2010 and February 2011). None of the measurements exceeded the WQTL for SC. March 2011 marked the end of two consecutive years of monitoring with no exceedances.

Outreach

As mentioned above, the Coalition initiated general outreach in 2007 and has taken several actions to address water quality impairments in the Highline Canal @ Lombardy Rd subwatershed, including grower notification, management practice outreach and education, and tracking of management practice implementation. Through Coalition mailings and meetings/workshops, growers have been made aware of downstream water and sediment quality problems as well as the importance of

implementing management practices on their farms. The Coalition's outreach and education in the subwatershed to keep growers informed of emerging water quality concerns and relevant regulations, opportunities for funding management practice implementation, and results of studies of management practice efficacy.

The absence of DO and SC exceedances since March 2008 demonstrates that water quality has improved in at the Highline Canal @ Lombardy Rd with respect to DO and SC. The Coalition will continue to provide outreach to all members within the Highline Canal @ Lombardy Rd subwatershed. In addition, this subwatershed becomes a high priority subwatershed in 2013 for other constituents and outreach will continue with growers with the greatest likelihood of contributing to past exceedances. Through continued and upcoming outreach, the Coalition will keep growers informed of water quality problems which will prevent future DO and SC exceedances.

Future Monitoring

Assessment Monitoring was conducted at the Highline Canal @ Lombardy Rd sampling location in 2011 and will continue through 2012. In addition, DO and SC are field parameters that will be measured during every event, including MPM. Therefore DO and SC will also be monitored in 2013 through 2015 as a part of MPM.

Justification to Remove Constituents from Highline Canal @ Lombardy Rd Management Plan

Growers within the Highline Canal @ Lombardy Rd site subwatershed are aware of water quality problems regarding DO and SC and took actions to eliminate these problems. Monitoring in Highline Canal @ Lombardy Rd resulted in two consecutive years without DO or SC exceedances. Therefore the Coalition requests that DO and SC be removed from the Highline Canal @ Lombardy Rd management plan and MPM schedule.

The Highline Canal @ Lombardy Rd subwatershed will begin its first year of focused outreach to address high priority constituents within its management plan in 2013, and actions will include initial and follow up contacts with targeted growers and MPM. The Coalition believes its continued contact with growers who have the greatest potential to impact water quality will prevent future DO and SC exceedances.

Hilmar Drain @ Central Ave

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos

Subwatershed Overview and Monitoring History

The Hilmar Drain @ Central Ave site subwatershed is within the Prairie Flower Drain @ Crows Landing Rd Zone (Zone 2). Normal Monitoring began at the site in 2005 and continued through 2008 and MPM occurred at the site in 2009. Under the 2008 MRPP, the site is scheduled for Assessment Monitoring in 2021 through 2022. The subwatershed includes two upstream monitoring locations, Hilmar Drain @ Mitchell Rd and Reclamation Drain @ Williams Ave, which were monitored during July 2008 as a part of MPM.

The Coalition began conducting outreach and education in the Hilmar Drain @ Central Ave subwatershed in 2007. The subwatershed is one of the Coalition's forth set of high priority management plan subwatersheds (focused outreach 2012-2014). Management Plan Monitoring occurred at the site in 2007 through 2009, and will occur again in 2012 for high priority constituents during months of past exceedances. The Coalition identified four growers with the greatest likelihood of contributing to the water quality problems (growers farming parcels with the potential for direct drainage to the creek and growers who have applied high priority constituents in the past). The Coalition plans to contact these growers in early 2012 to document their current management practices and encourage the implementation of additional management practices designed to eliminate water quality problems in Hilmar Drain. The Coalition will follow up with targeted growers in 2013 to determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

Chlorpyrifos exceeded the WQTL once in samples collected from Hilmar Drain @ Central Ave during July 2006 Normal Monitoring. Since the July 2006 exceedance, the Coalition monitored 18 events for chlorpyrifos at Hilmar Drain @ Central Ave and no exceedances of the WQTL occurred. The 18 events were all a part of Normal Monitoring scheduled for the remainder of the 2006 irrigation season and for the 2007 and 2008 storm and irrigation seasons. These dates included monitoring twice for chlorpyrifos during the month of July. The end of two years of consecutive monitoring with no exceedances was July 2008.

Of note, chlorpyrifos use in the Hilmar Drain subwatershed peaked in 2008 (229 lbs AI across 391 acres), during which there were no detections of chlorpyrifos during Normal Monitoring in the storm and irrigation seasons. Coalition outreach in the subwatershed since 2007 increased grower awareness of chlorpyrifos problems and informed growers of management practices designed to eliminate exceedances. Since 2008, chlorpyrifos use in the subwatershed declined (54 lbs AI across 55 acres in 2010) and the Coalition believes chlorpyrifos use will remain low in the subwatershed into the future.

Outreach

The Coalition initiated outreach in 2007 and took several actions to address water quality problems in the Hilmar Drain @ Central Ave site subwatershed, including grower notification, management practice outreach and education, and tracking of management practice implementation. Through Coalition mailings and meetings/workshops, growers were made aware of downstream water and sediment quality problems as well as the importance of implementing management practices on their farms. The Coalition's outreach and education in the subwatershed will keep growers informed of emerging water quality concerns and relevant regulations, opportunities to obtain funding for management practice implementation, results of studies of management practice efficacy, and management practice implementation and tracking activities. The Coalition believes that outreach and education in the Hilmar Drain @ Central Ave subwatershed has led to the elimination of exceedances of the chlorpyrifos WQTL.

This subwatershed becomes a high priority subwatershed in 2012 for other constituents and outreach will continue with growers with the greatest likelihood of contributing to exceedances. Through continued outreach, the Coalition will keep growers aware of water quality problems which will prevent the reoccurrence of exceedances of the chlorpyrifos WQTL.

Future Monitoring

Assessment Monitoring is scheduled for the site in 2021 through 2022 and will include monitoring for chlorpyrifos.

Justification to Remove Constituents from Hilmar Drain @ Central Ave Management Plan

Growers within the Hilmar Drain @ Central Ave site subwatershed are aware of water quality problems regarding chlorpyrifos and have taken actions to address these problems. Chlorpyrifos use in the subwatershed peaked in 2008, yet monitoring during eight months of that year did not detect any chlorpyrifos in Hilmar Drain @ Central Ave. Since the most recent exceedance, monitoring was conducted for two consecutive years with no chlorpyrifos exceedances. The Coalition therefore requests that chlorpyrifos be removed from the Hilmar Drain @ Central Ave management plan and MPM schedule.

The Coalition believes its outreach at Hilmar Drain will continue to keep growers aware of water quality problems due to agriculture. Hilmar Drain will begin its first year of focused outreach to address other high priority constituents within its management plan in 2012, and actions will include initial and follow up contacts with targeted growers and MPM. The Coalition believes its continued outreach and individual contact with growers will prevent future chlorpyrifos exceedances.

Lateral 2 ½ near Keyes Rd

Constituents Requested to Remove from Management Plan:

- *E. coli*

Subwatershed Overview and Monitoring History

Lateral 2 ½ near Keyes Rd is a rotating Assessment Monitoring location within the Prairie Flower Zone (Zone 2). Monitoring began at the Lateral 2 ½ near Keyes Rd site subwatershed under the new MRPP in the fall of 2008 and continued through 2011. Assessment Monitoring took place from 2008 through 2010. Management Plan Monitoring of high priority constituents began in 2011 (April and July) and will continue through 2013. Assessment Monitoring is scheduled for 2029 and 2030. Lateral 2 ½ near Keyes Rd was not sampled due to the channel being dry in 2008 (December), 2009 (January, February, March, November and December) and 2010 (January, February, November and December).

The Lateral 2 ½ near Keyes Rd subwatershed is one of the Coalition's third set of high priority management plan subwatersheds (focused outreach 2011-2013). The Lateral 2 ½ near Keyes Rd site subwatershed management plan was established in 2011 and MPM began in 2011 and is scheduled through 2013. In addition, the Coalition identified growers with the greatest likelihood of contributing to the water quality problems (growers farming parcels with the potential for direct drainage who have applied high priority constituents in the past or whose applications are associated with toxicity). The Coalition contacted 24 growers in 2010 and 2011 to document their current management practices and encourage the implementation of additional practices designed to eliminate water quality problems. The Coalition will follow up with targeted growers in 2012 and 2013 to determine which additional management practices were implemented.

Constituent Monitoring Results and Sourcing

E. coli

There were two exceedances of the WQTL for *E. coli* at the Lateral 2 ½ near Keyes Rd site, both occurring in 2008 (October and November). According to habitat notes from October and November 2008, there was a smell of manure at the sample location and flow was minimal to none. It is likely that the back to back *E. coli* exceedances were the result of a feedlot/dairy influence upstream that remained in the water column due to low flows.

Since the most recent *E. coli* exceedance in November 2008, the Lateral 2 ½ near Keyes monitoring location has been sampled for *E. coli* 25 times, of which six events took place during a storm event (site was dry during ten events, including five of the six storm events). There were no exceedances of *E. coli* in 2009 or 2010. In addition to monitoring that occurred during months of past exceedances, *E. coli* was monitored during all months sampled in 2009 and 2010 as part of Assessment Monitoring. *E. coli* is a low priority constituent and is only monitored during Assessment Monitoring and was therefore not

monitored in 2011. *E. coli* is scheduled to be monitored again once Lateral 2 ½ near Keyes Rd rotates back into Assessment Monitoring (2029-2030). The end of two consecutive years of monitoring during months of past exceedances was November 2010.

Outreach

In the Coalition's approved Management Plan, the Lateral 2 ½ near Keyes Rd subwatershed is a high priority subwatershed as of 2011 and will remain through 2013. The Coalition actively engaged in grower outreach and education since 2007 to address management plan constituents, including *E. coli*. The Coalition's strategy is to focus on providing information on a subwatershed level to growers to review their operation and determine if irrigation return flows are managed properly. Outreach includes grower notification, management practice outreach and education, tracking of management practice implementation, and providing information on studies of management practice efficacy. The Coalition also organized individual grower meetings and produced mailings to educate growers about management practices and their importance in achieving acceptable water quality.

The Coalition contacted 24 targeted members in 2010 and 2011 to inform growers about management practices as well as to assess current and expected future implementation of management practices. Follow up with the targeted members will occur in 2012 to determine if additional management practices were implemented and if any are planned to be implemented. Management Plan Monitoring will continue through 2013 to assess water quality. *E. coli* was discussed during individual contacts and will continue to be discussed at annual grower meetings.

Future Monitoring

E. coli is a low priority constituent under the current management plan for Lateral 2 ½ near Keyes Rd. Assessment Monitoring under the 2008 MRPP is scheduled to occur in 2029 and 2030. Management Plan Monitoring will continue to take place for high priority constituents during months of past exceedances through 2013 to assess the effect of outreach on water quality.

Justification to Remove Constituents from Lateral 2 ½ near Keyes Rd Management Plan

The Coalition met with growers in the Lateral 2 ½ near Keyes Rd subwatershed and addressed management plan constituents within the subwatershed with a focused, detailed approach for sourcing past exceedances. The outcome of these efforts was the implementation of new management practices as well as increased grower awareness of the role of agriculture in causing water quality problems. Management Plan Monitoring results indicate two consecutive years with no exceedances of the WQTL for *E. coli*. Therefore, the Coalition requests that *E. coli* be removed from the Lateral 2 ½ near Keyes Rd management plan and MPM schedule.

Growers within the Lateral 2 ½ near Keyes Rd site subwatershed are aware of water quality problems with *E. coli* and have taken actions to address these concerns. While continued outreach will focus mainly on other high priority constituents, all water quality results will be reviewed and discussed,

including *E. coli*. Monthly Assessment Monitoring in 2029 will include the monitoring of *E. coli* and will allow the Coalition to further evaluate water quality at the Lateral 2 ½ near Keyes Rd subwatershed.

Merced River @ Santa Fe

Constituents Requested to Remove from Management Plan:

- Dissolved Oxygen (DO)

Subwatershed Overview and Monitoring History

Under the current ESJWQC 2008 MRPP, Merced River @ Santa Fe is the Core Monitoring location within the Merced River @ Santa Fe Zone (Zone 4). Normal Monitoring was initiated during the irrigation season of 2004 and continued through the irrigation season of 2008. Core Monitoring began at Merced River @ Santa Fe in the fall of 2008 and continued through 2010; Assessment Monitoring occurred in 2011. Management Plan Monitoring took place in 2008 (July and August) as well as in 2010 (January). The upstream location Dry Creek @ Oakdale Rd was sampled from November 2009 through January 2010 for MPM. However, Dry Creek @ Oakdale Rd was dry all months sampled except January 2010.

The Coalition has conducted outreach and education in the Merced River @ Santa Fe subwatershed since 2007 through surveys to assess current management practices, mailings, quarterly updates and annual meetings. The Coalition believes that this outreach sufficiently informed growers of DO water quality problems in the Merced River and as a result, water quality has improved.

Constituent Monitoring Results and Sourcing

Dissolved Oxygen (DO)

There have been four exceedances of the WQTL for DO in the Merced River @ Santa Fe subwatershed, which occurred in 2006 (March), 2008 (April) and 2009 (July and October).

Dissolved oxygen is measured as a field parameter at each site during every monitoring event (Core Monitoring, Assessment Monitoring, and MPM). Monitoring for DO occurred during each monitoring event and will continue for all future monitoring events. There have been no exceedances of DO since October 2009 in 28 events, including five storm events. An upstream sample location, Dry Creek @ Oakdale Rd, was sampled three times for DO since October 2009 (two dry events and one storm event in January 2010). As of October 2011, there have been two consecutive years of no exceedances.

Outreach

The Coalition initiated general outreach in 2007 and took several actions to address water quality problems including grower notification and management practice outreach and education. Through mailings and annual meetings/workshops, growers were informed about water quality problems as well as the importance of implementing management practices on their farms. The Coalition continues outreach and education in the subwatershed to insure growers are well informed of emerging water quality concerns, relevant regulations, and opportunities for funding management practice implementation. In addition to continued general outreach with annual meetings and mailings, focused outreach for growers within the Merced River @ Santa Fe site is scheduled for 2013-2015. The Coalition's strategy for focused outreach is to contact growers with the greatest likelihood of

contributing to exceedances of high priority constituents or constituents that could contribute to toxicity. During individual meetings with growers, the Coalition reviews each grower's operation, documents management practices and discusses water quality problems including high priority constituents and low priority constituents such as DO. Growers are encouraged to evaluate their farming operations in order to avoid agricultural discharge and water quality issues.

The Coalition continues to provide general outreach to all members within the Merced River @ Santa Fe site subwatershed. Through grower notifications and grower meetings, members continue to be informed about water quality results, relevant management practices that eliminate water quality problems, availability of funding for management practice implementation, results of studies of management practice efficacy, and management practice implementation and tracking activities.

Future Monitoring

Merced River @ Santa Fe is scheduled for Core Monitoring in 2012 and 2013, during which DO will continue to be monitored each month. Assessment Monitoring is scheduled to occur at Merced River every third year, the next year being 2014.

Justification to Remove Constituents from Merced River @ Santa Fe Management Plan

The Coalition performed grower outreach in the Merced River @ Santa Fe subwatershed beginning in 2007. The outcome of these efforts is increased grower awareness of the role of agriculture in causing water quality problems. The results of monitoring indicate two consecutive years of no exceedances of the WQTLs for DO. Therefore, the Coalition requests that DO be removed from the Merced River @ Santa Fe management plan.

The Coalition believes its outreach will keep growers informed about water quality problems due to agriculture. In addition, Core Monitoring is scheduled for 2012 and will include DO measurements since it is a field parameter monitored during every event. This will allow the Coalition to further evaluate water quality with respect to DO and other high priority constituents.

Mustang Creek @ East Ave

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos
- Simazine

Subwatershed Overview and Monitoring History

Under the current ESJWQC 2008 MRPP, Mustang Creek @ East Ave is a rotating Assessment Monitoring location within the Highline Canal @ Hwy 99 Zone (Zone 3). Mustang Creek is an ephemeral waterbody and it is frequently dry; flow is found primarily during winter runoff events. Monitoring occurred the irrigation season of 2006 through 2010. Normal Monitoring was initiated at Mustang Creek in the irrigation season of 2006 and continued through the irrigation season of 2008 under the 2006 MRPP. Under the current 2008 MRPP, Assessment Monitoring began in the fall of 2008 and continued through December 2010, with MPM in 2010 (January and February) for chlorpyrifos and simazine. Mustang Creek is scheduled to rotate into an Assessment Monitoring location again in 2015 and 2016.

The Coalition conducted outreach and education in the Mustang Creek @ East Ave subwatershed since 2007 through surveys to assess current management practices, mailings, quarterly updates and annual meetings. The Mustang Creek @ East Ave site subwatershed is one of the Coalition's sixth set of high priority management plan subwatersheds (focused outreach 2014-2016). The Coalition has yet to begin its focused outreach approach, but has conducted MPM for both chlorpyrifos and simazine. The Coalition believes that general outreach efforts have sufficiently informed growers of water quality problems such as chlorpyrifos and simazine exceedances in Mustang Creek and as a result, chlorpyrifos and simazine are eliminated in the Mustang Creek @ East Ave subwatershed.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

Chlorpyrifos exceeded the WQTL twice in samples collected from the Mustang Creek @ East Ave site subwatershed. Exceedances occurred during storm monitoring events in 2008 (January and February).

Since the most recent chlorpyrifos exceedance in February 2008, the Mustang Creek @ East Ave location has been monitored for chlorpyrifos 33 times; however, water was only present during eight of the events, two of which the waterbody consisted of non contiguous puddles (March and October 2009). There were no detections of chlorpyrifos in any of the samples collected from the eight events. The end of two consecutive years of monitoring during months of past exceedances was February 2010.

In addition, PUR data indicate an overall decreasing trend in chlorpyrifos applications and acres treated in the Mustang Creek @ East Ave subwatershed since 2004 (26,412 lbs AI across 9,919 acres) compared to 2010 (9,104 lbs AI across 5,257 acres).

Simazine

Simazine is an herbicide commonly used during the dormant season in the San Joaquin Valley. Simazine exceeded the WQTL twice in samples collected from the Mustang Creek @ East Ave site subwatershed. Exceedances of simazine occurred in concurrence with exceedances of chlorpyrifos during the storm season of 2008 (January and February).

Since the most recent simazine exceedance in February 2008, the Mustang Creek @ East Ave location was monitored for simazine 33 times however, water was only present eight of the events, during two of which the waterbody consisted of non contiguous puddles (March and October 2009). The end of two consecutive years of monitoring during months of past exceedances was February 2010.

In addition, PUR data indicate an overall slight decreasing trend in simazine applications and acres treated in the Mustang Creek @ East Ave subwatershed since 2009 (5,799 lbs AI across 10,096 acres) compared to 2010 (4,004 lbs AI across 7,136 acres).

Outreach

The Coalition initiated general outreach in 2007 and has taken several actions to address water quality problems in the subwatershed. Actions include grower notification and management practice outreach and education. Through mailings and annual meetings/workshops, growers were informed about water quality problems as well as the importance of implementing management practices within their farm operations. Coalition outreach and education in the subwatershed keep growers informed of emerging water quality concerns, relevant regulations, and opportunities for management practice implementation funding.

In addition to continued outreach through annual meetings and mailings, focused outreach for growers within the Mustang Creek @ East Ave site is scheduled for 2014-2016. The Coalition contacts growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity. During individual meetings with growers, the Coalition reviews each grower's operation, documents management practices and discusses water quality problems. Growers are encouraged to evaluate their farming operations to eliminate agricultural discharges that cause water quality problems.

Through grower notifications and meetings, members continue to be informed about water quality results, relevant management practices that eliminate water quality problems, availability of funding for management practice implementation, results of studies of management practice efficacy, and management practice implementation and tracking activities.

Future Monitoring

Mustang Creek is a sixth priority subwatershed and is scheduled for focused outreach from 2014-2016, during which time Management Plan Monitoring will take place during months of past exceedances. Mustang Creek @ East Ave is also scheduled to rotate into Assessment Monitoring in 2015 and 2016.

The Coalition performed grower outreach within the Mustang Creek @ East Ave subwatershed since 2007. The outcome of these efforts is increased grower awareness of the role of agriculture in causing water quality problems. The results of monitoring indicate two consecutive years of no exceedances of the WQTLs for chlorpyrifos and simazine. Therefore, the Coalition requests that chlorpyrifos and simazine be removed from the Mustang Creek @ East Ave management plan.

Growers within the Mustang Creek @ East Ave site subwatershed are aware of water quality problems regarding chlorpyrifos and simazine. Monitoring results and PUR analysis suggest that growers have taken actions to eliminate these problems.

The Coalition believes its outreach within Mustang Creek @ East Ave will continue to make growers aware of water quality problems due to agriculture. In addition, Assessment Monitoring is scheduled to begin in 2015 and will include monitoring for chlorpyrifos and simazine. This will allow the Coalition to further evaluate water quality at the Mustang Creek @ East Ave subwatershed with respect to chlorpyrifos, simazine and other high priority constituents.

Prairie Flower Drain @ Crows Landing Rd

Constituents Requested to Remove from Management Plan:

- Chlorpyrifos
- pH

Subwatershed Overview and Monitoring History

The Prairie Flower Drain @ Crows Landing Rd subwatershed is the Core Monitoring location in Zone 2 (Prairie Flower Drain @ Crows Landing Rd Zone). Monitoring at Prairie Flower Drain @ Crows Landing Rd was initiated during the storm season of 2005 and has continued uninterrupted through 2011. Assessment Monitoring at this site occurred in 2011 and is scheduled to recur every third year (2014, 2017). Core Monitoring will resume at this location in 2012 and continue through 2013. Management Plan Monitoring was initiated at the site during the 2007 irrigation season. Upstream monitoring at Prairie Flower Drain @ Morgan Rd occurred during the irrigation season of 2008 for high priority constituents. Management Plan Monitoring occurred during months of past exceedances at the Prairie Flower Drain @ Crows Landing Rd site from 2009 through 2011 and is scheduled again in 2012.

The Prairie Flower Drain @ Crows Landing Rd site subwatershed is one of the Coalition's first set of high priority management plan subwatersheds (focused outreach 2008-2010). In addition to Management Plan Monitoring (2009-2011), the Coalition identified growers with the greatest likelihood of contributing to the water quality impairments (growers farming parcels with the potential for direct drainage to the creek, growers who applied high priority constituents or those associated with toxicity in the past). The Coalition contacted these growers in 2009 (an additional new member was contacted in 2010) to document their current management practices and encourage the implementation of additional practices designed to eliminate water quality problems. The Coalition followed up with all targeted growers to determine which additional management practices were implemented.

The Coalition believes that this continued outreach sufficiently informed growers of water quality problems such as chlorpyrifos and pH in Prairie Flower Drain and as a result, water quality improved. The Coalition believes that water quality impairments due to chlorpyrifos and pH are eliminated in the Prairie Flower Drain @ Crows Landing Rd subwatershed.

Constituent Monitoring Results and Sourcing

Chlorpyrifos

Chlorpyrifos exceeded the WQTL four times in samples collected from the Prairie Flower Drain @ Crows Landing Rd subwatershed. No exceedances of chlorpyrifos occurred during upstream monitoring in 2008 at Prairie Flower Drain @ Morgan Rd. All exceedances occurred during the irrigation season (August and September 2005, August 2007 and August 2008).

Since the most recent exceedance in August 2008, the Coalition completed Normal Monitoring in 2008 (September) and conducted MPM for chlorpyrifos in 2009 (August), 2010 (August and September) and

2011 (August and September). Assessment Monitoring occurred in 2011 when chlorpyrifos was monitored from January through December. Lab results received through October 2011 indicate that chlorpyrifos did not exceed in the WQTL during any of these 17 events, including one upstream event. The end of two consecutive years of monitoring with no exceedances was September 2011.

In addition, PUR data indicates a substantial decline of chlorpyrifos use in the Prairie Flower Drain @ Crows Landing Rd subwatershed. Chlorpyrifos use in the Prairie Flower Drain @ Crows Landing Rd subwatershed was highest in 2005 (751 lbs AI across 952 acres) compared to 2010 (80 lbs AI across 134 acres).

pH

Six exceedances of the pH WQTL occurred at the Prairie Flower Drain @ Crows Landing Rd monitoring location, three of which were during storm events.

Since pH is a field parameter measured during every sampling event, and the Prairie Flower Drain @ Crows Landing Rd is a Core Monitoring location, the Coalition measured pH at least once a month since October 2008. The most recent exceedance of pH was in March 2009 and the Coalition has since measured pH during 35 events through December 2011. There were no exceedances of the pH WQTL in any of the 35 events. The end of two consecutive years of monitoring was March 2011.

Outreach

The Prairie Flower Drain @ Crows Landing Rd site subwatershed is one of the first high priority site subwatersheds to receive a focused, detailed approach to addressing its management plan constituents. The Coalition contacted growers with the greatest likelihood of contributing to exceedances of high priority constituents or constituents that could contribute to toxicity. The Coalition conducted individual meetings with 11 growers in 2009 to review each grower's operation and document their current management practices as well as discuss water quality problems, including chlorpyrifos and pH. The Coalition encouraged growers to evaluate their farming operations in order to eliminate off-site movement of pesticides, and management practices were recommended if they could be effective in reducing agricultural discharges. Targeted growers were re-contacted the next year to determine if recommended and/or new practices were implemented.

As a result of focused outreach, targeted growers became more aware of water quality problems in and made adjustments to their operations, including implementing new management practices, that successfully improved water quality as reflected by the absence of exceedances of the WQTLs for chlorpyrifos and pH.

The Coalition continues to provide outreach to all members within the Prairie Flower Drain @ Crows Landing Rd site subwatershed. Through grower notifications and meetings, members continue to be made informed about water quality results, relevant management practices that eliminate water quality problems, availability of funding for management practice implementation, results of studies of

management practice efficacy, and management practice implementation and tracking activities. In addition, this subwatershed remains a high priority subwatershed for other constituents and focused outreach continues with growers who have the greatest likelihood of contributing to those exceedances. Through continued outreach the Coalition will continue to make growers aware of water quality problems which will prevent the reoccurrence of exceedances of the chlorpyrifos and pH WQTLs.

Future Monitoring

Field parameters such as pH, are monitored during every monitoring event (MPM, Core or Assessment). Assessment Monitoring occurred at Prairie Flower Drain @ Crows Landing Rd in 2011 and is scheduled to recur every third year (2014, 2017). During these periods, the Coalition will monitor monthly for chlorpyrifos.

Justification to Remove Constituents from Prairie Flower Drain @ Crows Landing Rd Management Plan

The Coalition addressed the management plan constituents within the Prairie Flower Drain @ Crows Landing Rd subwatershed with a focused, detailed approach for sourcing past exceedances and conducting individual outreach with targeted growers. The result is the implementation of new management practices as well as increased grower awareness of the role of agriculture in causing water quality problems. Management Plan Monitoring results indicate two consecutive years with no exceedances of the WQTLs for chlorpyrifos and pH. The PUR data also indicate that chlorpyrifos use has declined significantly since the commencement of outreach. Therefore the Coalition requests that chlorpyrifos and pH be removed from the Prairie Flower Drain @ Crows Landing Rd management plan and MPM schedule.

The Coalition believes its outreach within the subwatershed will continue to keep growers aware of water quality problems due to agriculture. In addition, the Coalition will continue MPM for other high priority constituents and is scheduled to conduct monthly Assessment Monitoring for all constituents in 2014.